

HUMAN REPRODUCTION

1. Which one is a primary sex organ?
 - (a) Penis
 - (b) Testis
 - (c) Prostate
 - (d) Scrotum
2. Which of the following is primary sex organ?
 - (a) Ovary
 - (b) Vagina
 - (c) Uterus
 - (d) Fallopian tube
3. Which of the following is a secondary sex organ?
 - (a) Beard
 - (b) Uterus
 - (c) Ovary
 - (d) Broad hips
4. In males, the essential hormone for secondary sexual characteristics is:
 - (a) relaxin
 - (b) estrogen
 - (c) testosterone
 - (d) progesterone
5. Secondary sexual characters in females are due to:
 - (a) estrogens
 - (b) androgens
 - (c) progesterone
 - (d) cholecystokinin
6. The penis of a male is:
 - (a) primary sex organ
 - (b) accessory sex organ
 - (c) secondary sex organ
 - (d) external genitalia
7. An accessory sex character is:
 - (a) thyroid (b) beard
 - (c) pituitary (d) ovary
8. Testes of man occur:
 - (a) inside body
 - (b) above dorsal aorta
 - (c) in scrotal sacs
 - (d) on the sides of kidney
9. Scrotal sacs are connected with abdominal cavity by:
 - (a) Vaginal cavity
 - (b) Inguinal canal
 - (c) Spermatic canal
 - (d) Haversian canal
10. The testes in humans are situated outside the abdominal cavity inside a pouch called scrotum. The purpose served is for:
 - (a) acceleration of maturation of sperms
 - (b) providing more space for the growth of epididymis
 - (c) escaping any possible compression by the visceral organs
 - (d) maintaining the scrotal temperature lower than the internal body temperature
 - (e) providing a secondary sexual feature for exhibiting the male sex

11. Abdominal testes are found in:
 - (a) cat
 - (b) horse
 - (c) whale
 - (d) monkey
12. In mammals, failure of testes to descend into the scrotum is known as:
 - (a) castration
 - (b) impotency
 - (c) paedogenesis
 - (d) cryptorchidism
13. Gubernaculum is the ligamentous connective cord which connects:
 - (a) testis to kidney
 - (b) testis to scrotum
 - (c) muscle to muscle
 - (d) ovary to abdominal wall
14. In mammals, each testis is connected to the abdominal wall by:
 - (a) mesovarium
 - (b) gubernaculum
 - (c) mesorchium
 - (d) spermatic cord
16. Seminiferous tubules occur in:
 - (a) liver
 - (b) testis
 - (c) ovary
 - (d) kidney
17. Sperms are produced in:
 - (a) vas deferens
 - (b) prostate gland
 - (c) interstitial cells
 - (d) seminiferous tubules
18. Cells of Leydig are found in:
 - (a) testis of frog
 - (b) kidney of frog
 - (c) testis of rabbit
 - (d) kidney of rabbit
19. Leydig cells produce:
 - (a) estrogen
 - (b) testosterone
 - (c) progesterone
 - (d) corticosterone
20. Which of the following is independent of testosterone?
 - (a) Spermatogenesis
 - (b) Development of penis
 - (c) The function of prostate glands
 - (d) Foetal development of the testis from a bipotential gonad
21. The primary regulator of Leydig cell secretion is:
 - (a) FSH releasing factor
 - (b) Androgen-binding protein
 - (c) Luteinizing hormone (LH)
 - (d) Follicle stimulating hormone

22. Supporting cells found in between the germinal epithelium of testis are called:
- (a) Phagocytes
 - (b) Sertoli cells
 - (c) Leydig cells
 - (d) Granular cells
23. Sertoli cells are found:
- (a) between the seminiferous tubules
 - (b) in the germinal epithelium of ovary
 - (c) in the upper part of the Fallopian tube
 - (d) in the germinal epithelium of the seminiferous tubules
24. In the vertebrate testes, for nourishment during spermiogenesis, the spermatids get attached to:
- (a) Sertoli cells
 - (b) Spermatocytes
 - (c) Interstitial cells
 - (d) Sperm-mother cells
25. Sertoli cells are found in testis. These cells are:
- (a) nurse cells
 - (b) reproductive cells
 - (c) receptor cells
 - (d) none of these
26. Which of the following is correct about mammalian testes?
- (a) Graafian follicles, Sertoli cells, Leydig cells
 - (b) Sertoli cells, Seminiferous tubules, Leydig cells
 - (c) Graafian follicles, Leydig cells, Seminiferous tubules
 - (d) Graafian follicles, Sertoli cells, Seminiferous tubules
27. Sperms are temporarily stored and matured in:
- (a) prostate
 - (b) epididymis
 - (c) seminal vesicle
 - (d) all of these
28. The head of epididymis is called:
- (a) vas deferens
 - (b) gubernaculum
 - (c) caput epididymis
 - (d) cauda epididymis
29. Cauda epididymis leads to :
- (a) rete testis
 - (b) vas efferens
 - (c) vas deferens
 - (d) ejaculatory duct
30. The function of vas deferens is to:
- (a) Store the sperms
 - (b) mature the sperms
 - (c) conduct the sperms
 - (d) none of the above
31. If the vasa differentia of a man are surgically cut or blocked:
- (a) semen will be without sperms
 - (b) spermatogenesis will not take place
 - (c) testosterone will disappear from blood
 - (d) sperms in the semen become nonmotile

32. Major part of semen is secreted by:
- (a) Seminal vesicle
 - (b) Prostate gland
 - (c) Cowper's gland
 - (d) Bartholin's gland
33. The common duct formed by the union of vas deferens and duct from seminal vesicle is:
- (a) Urethra
 - (b) Mullerian duct
 - (c) Spermatic duct
 - (d) Ejaculatory duct
34. Cowper's glands are found in:
- (a) male mammals
 - (b) female mammals
 - (c) male amphibians
 - (d) female amphibians
35. Cowper's gland secretes a substance to:
- (1) nourish sperms
 - (2) neutralize acidity
 - (3) kill pathogens
 - (4) lubricate female's vagina to facilitate copulation
- Answer codes:
- (a) 1 and 2 are correct
 - (b) 2 and 4 are correct
 - (c) 1 and 3 are correct
 - (d) 1, 2 and 3 are correct
36. The skin covering the glans penis is called:
- (a) prepuce
 - (b) epididymis
 - (c) corpora cavernosa
 - (d) corpus spongiosum
37. Corpora cavernosa are found in:
- (a) testis
 - (b) ovary
 - (c) penis
 - (d) uterus
38. Seminal fluid contains the secretions of:
- (a) Follicles, uterus and prostate gland
 - (b) Prostate, Cowper's and Bartholin's gland
 - (c) Seminal vesicle, uterus and prostate gland
 - (d) Seminal vesicle, prostate and Cowper's gland
39. Seminal fluid has a pH of about:
- (a) 6.0
 - (b) 7.4
 - (c) 8.5
 - (d) 9.0
40. Which one is unpaired gland in male reproductive system?
- (a) Seminal vesicle
 - (b) Cowper's gland
 - (c) Prostate gland
 - (d) Lacrimal gland
41. Prostate gland is a:
- (a) digestive gland
 - (b) sperm producing gland
 - (c) hormone producing gland of the ovary
 - (d) semen secreting accessory gland of male

42. Which of the following sugars in semen is a source of energy for the spermatozoa?

- (a) Sucrose
- (b) Fructose
- (c) Glucose
- (d) Galactose

43. Semen contains all of the following except:

- (a) mucus
- (b) fructose
- (c) substances to reduce the pH of the uterine environment
- (d) substances to increase the motility of the uterine muscles

44. How many sperms are usually found in an average (3mL) ejaculation?

- (a) 200 million
- (b) 300 million
- (c) 400 million
- (d) 500 million

46. Match the following:

Set I

- A Inguinal canal
- B Rete testis
- C Leydig cells
- D Prepuce
- E Corpora cavernosa

Set II

- 1 Net work of seminiferous tubules
- 2 Secondary sexual characters
- 3 For descending of testis
- 4 Dorsal bundles of muscles
- 5 Terminal skin of penis

- (a) A = 1, B = 2, C = 3, D = 5, E = 4
- (b) A = 3, B = 1, C = 4, D = 2, E = 5
- (c) A = 2, B = 4, C = 3, D = 5, E = 1
- (d) A = 3, B = 1, C = 2, D = 5, E = 4

47. The central vascular tissue of mammalian ovary is called:

- (a) stroma
- (b) medulla
- (c) theca interna
- (d) corona radiata

48. Mammalian ovarian follicle was first described by:

- (a) Harvey
- (b) Boveri
- (c) De Graaf
- (d) Von Baer

49. Graafian follicles are formed from:

- (a) stroma of ovaries
- (b) columnar epithelium of testes
- (c) germinal epithelium of ovaries
- (d) assembly of ribosomes in bacteria

50. In a Graafian follicle:

- (a) eggs are fertilized
- (b) there are many oocytes
- (c) there are many sperms
- (d) there is a single oocyte

51. Graafian follicles possess:

- (a) theca externa
- (b) granulosa
- (c) theca interna
- (d) all of these

52. Cumulus covers:
- (a) ovum
 - (b) ovary
 - (c) embryo
 - (d) all of these
53. Antrum is the cavity of:
- (a) Ovary
 - (b) Blastula
 - (c) Gastrula
 - (d) Graafian follicle
54. Graafian follicle is maintained by:
- (a) estrogen
 - (b) prolactin
 - (c) luteinizing hormone
 - (d) follicle stimulating hormone
55. Atretic follicles are found in the:
- (a) liver
 - (b) ovary
 - (c) testis
 - (d) thymus
56. The growth and maturation of Graafian follicle is controlled by:
- (a) FSH-LH
 - (b) GH-ADH
 - (c) FSH-LTH
 - (d) LH-ACTH
57. The release of mature ovum from Graafian follicle is known as:
- (a) oogenesis
 - (b) oviparity
 - (c) ovulation
 - (d) oviposition
58. Ovulation occurs under the influence of:
- (a) LH
 - (b) FSH
 - (c) Estrogens
 - (d) Progesterone
59. Which one holds corona radiata?
- (a) Lipoprotein
 - (b) Liposaccharide
 - (c) Oligosaccharide
 - (d) Mucopolysaccharide
60. Which is the correct sequence of layers in the mammalian egg from outside to inside?
- (a) Zona pellucida, corona radiata, plasma membrane
 - (b) Corona radiata, zona pellucida, plasma membrane
 - (c) Plasma membrane, zona pellucida, corona radiata
 - (d) None of the above
61. After ovulation, the collapsed ovarian follicle shrinks and becomes filled with cells to form:
- (a) corpus atresia
 - (b) corpus albicans
 - (c) corpus luteum
 - (d) corpus adiposum

62. When is progesterone secreted?
- (a) After ovulation
 - (b) After parturition
 - (c) Before ovulation
 - (d) At the time of parturition
63. Corpus luteum in mammals occurs in:
- (a) skin and acts as a pain receptor
 - (b) heart and initiates atrial contraction
 - (c) ovaries and produces progesterone hormone
 - (d) brain and connects two cerebral hemispheres
64. The growth of corpus luteum is initiated by:
- (a) FSH
 - (b) hCG
 - (c) Prolactin
 - (d) Luteinizing hormone
65. In females, the hormone inhibin is secreted by:
- (a) theca cells
 - (b) zona pellucida
 - (c) granulosa cells
 - (d) corpus luteum
66. Which of the following statements is correct?
- (a) Corpus luteum changes into corpus albicans
 - (b) Corpus luteum degenerates after fertilization
 - (c) Corpus luteum persists throughout the pregnancy
 - (d) Corpus luteum is not formed during the pregnancy
67. Which part of ovary in mammals acts as an endocrine gland after ovulation?
- (a) Stroma
 - (b) Corpus luteum
 - (c) Vitelline membrane
 - (d) Germinal epithelium
68. Corpus luteum is developed from:
- (a) Oocyte
 - (b) Nephrostome
 - (c) Graafian follicle
 - (d) None of these
69. An important function of progesterone is:
- (1) prepare uterus for pregnancy
 - (2) implantation of embryo
 - (3) maintenance of pregnancy
 - (4) stimulate ADH
- Answer Codes :
- (a) 1 and 2 are correct
 - (b) 2 and 4 are correct
 - (c) 1 and 3 are correct
 - (d) 1, 2 and 3 are correct
70. When both ovaries are removed from a rat which hormone is decreased in blood?
- (a) Oxytocin
 - (b) Prolactin
 - (c) Estrogen
 - (d) Gonadotrophic releasing factor

71. Expanded proximal part of oviduct is:
(a) uterus
(b) fallopian tube
(c) vestibule
(d) fimbriated funnel
72. When a mature egg leaves the ovary, it enters:
(a) follicle
(b) fallopian tubes
(c) endometrium
(d) interstitial cells
73. Which one of the following is out of place?
(a) Ureter
(b) Vagina
(c) Uterus
(d) Oviduct
74. Endometrium is the lining of:
(a) uterus
(b) vagina
(c) bladder
(d) oviduct
75. The cellular layer that disintegrates and regenerates again and again in humans is :
(a) dermis of skin
(b) cornea of the eye
(c) endometrium of uterus
(d) endothelium of blood vessels
76. Lower narrow end of uterus is termed:
(a) cervix
(b) hilus
(c) lumen
(d) infundibulum
77. Cervix is a part:
(a) of kidney
(b) of fallopian tube
(c) of epididymis
(d) between uterus and vagina
78. Bartholin's glands occur in:
(a) males and form liquid part of semen
(b) females and help in vestibular lubrication
(c) males and produce alkaline fluid for neutralizing urethral acidity
(d) females and produce estrogen for regulating secondary sexual characters
79. Bartholin's glands are situated:
(a) at the reduced tail end of birds
(b) on either side of vagina in humans
(c) on either side of vas deferens in humans
(d) on the sides of the head of some amphibians
80. Bartholin's glands of female correspond to which glands r male?
(a) Rectal glands
(b) Inguinal glands
(c) Prostate glands
(d) Cowper's glands

81. Vaginal orifice and urethral orifice open into:
(a) cervix
(b) vulva
(c) labia majora
(d) labia minora
82. Labium majora of a female mammal is homologous to:
(a) scrotal sac
(b) epididymis
(c) prostate gland
(d) seminal vesicle
83. Clitoris in a female mammal is:
(a) non-functional
(b) an overgrown structure
(c) analogous to penis of male
(d) homologous to penis of male
84. Correctly matched pairs are:
(1) Clitoris - Erectile body in female homo-logous to glans penis of male
(2) Sexual intercourse - Coitus
(3) Colostrum - Secretion found in seminal fluid
(4) Areola - Pigmented circular area around the nipple
Answer Codes:
(a) 1 and 2 are correct
(b) 2 and 4 are correct
(c) 1, 2 and 4 are correct
(d) 1 and 3 are correct
85. Which of the following are immortal?
(a) Brain cells
(b) Germ cells
(c) Pituitary cells
(d) All of these
86. Which type of cell division occurs in the gonads?
(a) Mitosis only
(b) Meiosis only
(c) Amitosis and meiosis
(d) Both mitosis and meiosis
87. Primary sex cells contain :
(a) diploid set of chromosomes
(b) haploid set of chromosomes
(c) as many chromosomes as the ovum
(d) as many chromosomes as the sperm
88. If a germ cell in a female gonad and a germ cell in a male gonad begin undergoing meiosis simultaneously, what will be the ratio of ova and sperms produced?
(a) 1 : 1
(b) 1 : 2
(c) 1 : 4
(d) 2 : 1
89. What happens during spermatogenesis?
(a) Mitosis
(b) Meiosis
(c) Metamorphosis
(d) Both (a) and (b)

90. By which cell division spermatogonia are formed?
- mitosis
 - amitosis
 - meiosis I
 - meiosis II
91. Correct sequence of cell stages in spermatogenesis is:
- spermatocytes, spermatids, spermatogonia, spermatozoa
 - spermatogonia, spermatocytes, spermatids, spermatozoa
 - spermatocytes, spermatogonia, spermatids, spermatozoa
 - spermatogonia, spermatids, spermatocytes, spermatozoa
92. Which one of the following pairs is diploid?
- Spermatid and sperm
 - Spermatogonia and spermatid
 - Primary and secondary spermatocytes
 - Spermatogonia and primary spermatocyte
93. Which of the following are haploid in nature?
- Spermatids
 - Spermatogonia
 - Primary spermatocytes
 - Secondary spermatocytes
- Answer Codes:
- 1 and 2 are correct
 - 1 and 4 are correct
 - 2 and 4 are correct
 - 1, 2 and 3 are correct
94. In the male human being, sperms contain one set of autosomes and:
- only one Y-chromosome
 - only one X-chromosome
 - both X and Y-chromosome
 - either X or Y-chromosome
95. Number of chromosomes in a primary spermatocyte is:
- same as in spermatid
 - same as in spermatogonium
 - half of that in spermatogonium
 - same as in secondary spermatocyte
96. $2n = 6$ in a primary spermatocyte which is in metaphase of first meiotic division. What shall be the total number of chromatids in each of the secondary spermatocyte?
- 6
 - 24
 - 32
 - 8
97. In humans, at end of the first meiotic division, the male germ cells differentiate into the:
- spermatids
 - spermatogonia
 - primary spermatocytes
 - secondary spermatocytes
98. Sperms formed from four primary spermatocytes are:
- 1
 - 4
 - 16
 - 32

99. The number of sperms formed from a secondary spermatocyte is:
(a) 2
(b) 4
(c) 6
(d) 8
100. How many secondary spermatocytes are required to form 400 spermatozoa?
(a) 40
(b) 100
(c) 200
(d) 400
101. Conversion of spermatid to a spermatozoon is called:
(a) cytokinesis
(b) vitellogenesis
(c) spermiogenesis
(d) spermatogenesis
102. The actual genetic part of the sperm is:
(a) tail
(b) head
(c) acrosome
(d) middle piece
103. Acrosome is found in the sperm at the:
(a) tail
(b) neck
(c) top of head
(d) middle piece
104. Acrosome is a type of:
(a) lysosome
(b) flagellum
(c) ribosome
(d) basal body
105. Acrosome of sperm is formed from:
(a) Nucleus of spermatid
(b) Centrosome of spermatid
(c) Mitochondria of spermatid
(d) Golgi complex of spermatid
106. The acrosome plays important role in:
(a) penetration of ovum by sperm
(b) providing energy to sperm
(c) motility of sperm
(d) none of the above
107. Enzyme hyaluronidase is synthesized in:
(a) Tail of sperm
(b) Head of sperm
(c) Golgi bodies of acrosome
(d) Mitochondria of acrosome
108. Which organelle is absent in human sperm?
(a) ER
(b) Nucleus
(c) Centriole
(d) Mitochondria

109. Mitochondria in the human spermatozoa are found in:
- (a) tail
 - (b) nucleus
 - (c) acrosome
 - (d) middle piece
110. A cross section at the midpoint of the middle piece of a human sperm will show:
- (a) centriole and mitochondria
 - (b) 9 + 2 arrangement of microtubules only
 - (c) mitochondria and 9 + 2 arrangement of microtubules
 - (d) centriole, mitochondria and 9 + 2 arrangement of microtubules
111. The middle piece of the sperm provides:
- (a) food
 - (b) energy
 - (c) centriole
 - (d) chromosome
112. The cytoplasm surrounding the mitochondria found in the middle piece of the sperm is called:
- (a) acrosome
 - (b) manchette
 - (c) microsome
 - (d) centrosome
113. Sperms move by:
- (a) tail
 - (b) head
 - (c) acrosome
 - (d) middle piece
114. Which of the following represents a condition where the motility of the sperms is highly reduced?
- (a) Polyspermy
 - (b) Azoospermia
 - (c) Oligospermia
 - (d) Asthenospermia
115. Besides activating the egg another role of a sperm is to carry to egg:
- (a) RNA
 - (b) Mitochondria
 - (c) DNA
 - (d) Ribosomes
116. The process by which ova are formed is known as:
- (a) ovulation
 - (b) oviparity
 - (c) oogenesis
 - (d) oviposition
117. Oogenesis comprises:
- (a) maturation phase
 - (b) growth phase
 - (c) multiplication phase
 - (d) all of these
118. During oogenesis, each diploid cell produces:
- (a) four functional cells
 - (b) four nonfunctional polar bodies
 - (c) one functional egg and three polar bodies
 - (d) two functional eggs and two polar bodies

119. 1st polar body is formed at which stage of oogenesis?
(a) 1st meiosis
(b) 2nd mitosis
(c) 1st mitosis
(d) differentiation
120. The number of chromosomes in a mature gamete gets halved during:
(a) meiosis II
(b) formation of first polar body
(c) formation of second polar body
(d) division of secondary oocyte and spermatocyte
121. Polar bodies are produced during the formation of:
(a) sperm
(b) oogonium
(c) spermatocyte
(d) secondary oocyte
122. In which phase of cell division is oocyte arrested?
(a) Interphase
(b) Prophase I
(c) Anaphase II
(d) Both prophase I and II
123. How many eggs will be formed from 100 primary oocytes?
(a) 100
(b) 200
(c) 300
(d) 400
124. How many ova and sperms will be produced from 100 secondary oocytes and 100 secondary spermatocytes during gametogenesis in man?
(a) 50 ova, 100 sperms
(b) 100 ova, 100 sperms
(c) 200 ova, 200 sperms
(d) 100 ova, 200 sperms
125. Cytoplasm of ovum does not contain:
(a) Ribosomes
(b) Mitochondria
(c) Golgi bodies
(d) Centrosomes
126. How many mature eggs are typically produced by each ovary of a non-pregnant women each year?
(a) 6
(b) 12
(c) 24
(d) 52
127. In oogenesis, haploid egg is fertilized by sperm at which stage?
(a) ovum
(b) oogonium
(c) primary oocyte
(d) secondary oocyte
128. The starting of menstruation in girls is:
(a) puberty
(b) menarche
(c) climacteric
(d) menopause
129. The number of days the menstrual phase of menstrual cycle lasts about:
(a) 4
(b) 10
(c) 14
(d) 28

130. The phase of menstrual cycle in humans that lasts for 3-4 days is:
- (a) luteal phase
 - (b) menstruation
 - (c) ovulatory phase
 - (d) follicular phase
131. Which of the following statements is incorrect about menstruation?
- (a) The menstrual fluid can easily clot
 - (b) During normal menstruation about 40mL blood is lost
 - (c) The beginning of the cycle of menstruation is called menarche
 - (d) At menopause in the female, there is especially abrupt increase in gonadotropic hormones
132. The first half of menstrual cycle is called:
- (a) secretory phase
 - (b) proliferative phase
 - (c) luteal phase
 - (d) none of these
133. Which of the following hormones is active during proliferative phase of menstrual cycle?
- (a) Estrogen
 - (b) Progesterone
 - (c) Testosterone
 - (d) All of these
134. Ovulation in the human female normally takes place during the menstrual cycle:
- (a) at the mid secretory phase
 - (b) at the end of the proliferative phase
 - (c) just before the end of the secretory phase
 - (d) at the beginning of the proliferative phase
135. In human menstrual cycle, ovulation occurs on:
- (a) 1st day
 - (b) 5th day
 - (c) 14th day
 - (d) 28th day
136. Ovulation takes place in/on:
- (a) ovary
 - (b) about the 14th day
 - (c) both of (a) and (b)
 - (d) none of these
137. The immediate cause of induction of ovulation in female is the large plasma surge of
- (a) LH
 - (b) FSH
 - (c) Estradiol
 - (d) Progesterone
138. Progesterone hormone is active during:
- (a) follicular phase
 - (b) secretory phase
 - (c) menstrual phase
 - (d) proliferative phase
139. Which hormone level reaches peak during luteal phase of menstrual cycle?
- (a) Estrogen
 - (b) Progesterone
 - (c) Luteinizing hormone
 - (d) Follicle stimulating hormone

140. Menstruation is triggered by an abrupt decline in the amount of:
- LH
 - Inhibin
 - Estrogen
 - Progesterone
141. Uterine endometrium, uterine glands and connective tissue are broken during menstrual phase. That is due to:
- lack of estrogen
 - lack of progesterone
 - over secretion of FSH
 - over production of progesterone
142. Menstrual cycle is controlled by:
- Estrogen and progesterone of ovary
 - FSH of pituitary
 - FSH and LH of pituitary
 - Oxytocin hormone
- Answer Codes:
- 1 and 2 are correct
 - 2 and 4 are correct
 - 1 and 3 are correct
 - 1, 2 and 3 are correct
143. Which one of the following is not a phase of the menstrual cycle?
- Luteal phase
 - Estrous phase
 - Follicular phase
 - Menstrual phase
144. Cessation of menstrual cycle is termed:
- menarche
 - menopause
 - impotency
 - none of these
145. After menopause there is a rise in urinary excretion of:
- | | |
|---------|---------|
| (a) FSH | (b) STH |
| (c) LTH | (d) MSH |
146. Estrous cycle is characteristic of:
- mammals
 - human females
 - mammalian females
 - non-primate mammalian females
147. Estrous cycle is an indication of:
- pregnancy
 - menopause
 - breeding period
 - estrogen secretion
148. Some important events in the human female reproductive cycle are given below. Arrange the events in a proper sequence.
 A–secretion of FSH, B–growth of corpus luteum, C–growth: of the follicle and oogenesis, D–ovulation, E–sudden increase in the levels of LH
- C A D B E
 - A C E D B
 - A D C E B
 - B A C D E

149. The change in a mammalian sperm which prepares it to fertilize the ovum is termed:
- (a) maturation
 - (b) preparation
 - (c) capacitation
 - (d) metamorphosis
150. Capacitation of sperms occurs in:
- (a) vagina
 - (b) vas efferens
 - (c) vas deferens
 - (d) female genital tract
151. Sperm capacitation involves:
- (a) hyaluronic acid.
 - (b) change in shape
 - (c) release of mitochondria
 - (d) removal of membrane fatty acids
153. Fertilization of sperm and ova takes place in:
- (a) ampulla of oviduct
 - (b) isthmus of oviduct
 - (c) fimbriae of oviduct
 - (d) none of these
154. During fertilization, the enzyme which facilitates penetration of the egg by the spermatozoan is:
- (a) hyaluronidase
 - (b) acid phosphatase
 - (c) acetylcholinesterase
 - (d) alkaline phosphatase
155. The fast block to polyspermy develops in response to the:
- (a) release of bindin
 - (b) formation of fertilization membrane
 - (c) spreading of fertilization cone around egg
 - (d) opening of sodium gates in the plasma membrane
156. The slow block to polyspermy develops in response to the:
- (a) release of bindin
 - (b) formation of fertilization membrane
 - (c) spreading of fertilization cone around egg
 - (d) opening of sodium gates in the plasma membrane
157. Which of the following is in the correct sequence?
- (a) zygote, cleavage, blastula, gastrula
 - (b) zygote, blastula, gastrula, cleavage
 - (c) zygote, cleavage, gastrula, blastula
 - (d) cleavage, zygote, blastula, gastrula
158. What is true about cleavage in fertilized egg in humans?
- (a) It is meroblastic
 - (b) It is identical to normal mitosis
 - (c) It starts when the egg reaches uterus
 - (d) It starts while the egg is in fallopian tube
159. Cleavage in mammals is:
- (a) discoidal
 - (b) superficial
 - (c) equal holoblastic
 - (d) unequal holoblastic

160. Which one of the following statements with regard to embryonic development in humans is correct?
- (a) In the second cleavage division one of the two blastomeres usually divides a little sooner than the second
 - (b) Cleavage divisions bring about considerable increase in the mass of protoplasm
 - (c) With more cleavage divisions the resultant blastomeres become larger and larger
 - (d) Cleavage division results in a hollow ball of cells called morula
161. The embryo at 16-celled stage is known as:
- (a) morula
 - (b) gastrula
 - (c) blastula
 - (d) blastomere
162. A mammalian blastula is called:
- (a) embryo
 - (b) blastocyst
 - (c) trophoderm
 - (d) foetal blastula
163. Zona pellucida disintegrates just:
- (a) after fertilization
 - (b) before fertilization
 - (c) midway during cleavage
 - (d) after completion of cleavage
164. Which germ layer develops first during embryonic development?
- (a) ectoderm
 - (b) mesoderm
 - (c) endoderm
 - (d) both (b) and (c)
165. In mammals, the body of embryo is formed from:
- (a) trophoblast
 - (b) inner cell mass
 - (c) outer cell mass
 - (d) trophoectoderm
166. Fixing up of the blastocyst in the wall of the uterus is known as:
- (a) fertilization
 - (b) placentation
 - (c) impregnation
 - (d) implantation
167. The fertilized egg in human female is implanted in the uterus after:
- (a) one month of fertilization
 - (b) two months of fertilization
 - (c) three weeks of fertilization
 - (d) about seven days of fertilization
168. What is implanted in the uterus?
- (a) Morula
 - (b) Neurula
 - (c) Gastrula
 - (d) Blastocyst
169. The portion of the endometrium that covers the embryo and is located between the embryo and uterine cavity is the:
- (a) decidua basalis
 - (b) decidua umbilicus
 - (c) decidua capsularis
 - (d) decidua functionalis

170. Human embryo will be called as a 'foetus' after:
- (a) two months
 - (b) six months
 - (c) four months
 - (d) seven months
171. Gestation period is the duration:
- (a) of fertilization
 - (b) between egg growth and ovulation
 - (c) between fertilization and parturition
 - (d) of preparation of sex cells and fertilization
172. Gestation period in human beings is:
- (a) 112-120 days
 - (b) 145-155 days
 - (c) 600-640 days
 - (d) 270-290 days
173. The animal with the longest gestation period is:
- (a) cow
 - (b) horse
 - (c) camel
 - (d) elephant
174. Delivery of developed foetus is scientifically called as:
- (a) abortion
 - (b) ovulation
 - (c) parturition
 - (d) oviposition
175. First or free milk is called:
- (a) rostrum
 - (b) colostrum
 - (c) cholesterol
 - (d) baby's milk
176. Which of the following induces parturition?
- (a) GH
 - (b) TSH
 - (c) oxytocin
 - (d) vasopressin
177. The first movements of the foetus and appearance of hair on its head are usually observed during which month of pregnancy?
- (a) Fourth month
 - (b) Fifth month
 - (c) Sixth month
 - (d) Third month
178. The signals for parturition originate from:
- (a) placenta only
 - (b) fully developed foetus only
 - (c) placenta as well as fully developed foetus
 - (d) oxytocin released from maternal pituitary